

ABSTRACT

A composite material and method of making the same are disclosed. An example method for fabricating a composite material forms a core layer between opposing outer layers. The core layer includes a mixture of at least one metallic powder and at least one expanding agent. The example method removes moisture and gasses from the core layer by applying a first vacuum pressure to at least the core layer. The example method compresses the core layer to bond the core layer to the outer layers while a second vacuum pressure is applied to at least one of the outer layers. The resulting composite material has a compacted core layer that is substantially free from moisture and imbedded gasses. Additionally, the outer layers are substantially free from perforations enabling the escape of gas and moisture during foaming of the core layer. The composite material may be reshaped to form semi-finished products which, in turn, may be heated to foam the core material to form finished products.